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REVIEW PAPER

Exploring the Significance of Blended Learning Models for L2 Educators in the Developing World: A Review of Current Literature

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ABSTRACT

This review aims to assist second language (L2) educators in the developing world, burdened by complexities and obligations imposed by the pandemic era and beyond. Its objective is to enhance the understanding of blended learning and its multitude of models and practices. Blended learning revolutionizes teaching and offers world language educators versatility, adaptability, and the space to customize learning. Although widely used, there is still uncertainty about what blended learning means, how it delivers what it intends to deliver, and which blended learning model might best serve L2 educators. To address these concerns, this paper evaluates various blended learning models in academic contexts, focusing on language instruction. The findings provide valuable insights into the implications, challenges, and opportunities within the field. L2 educators are encouraged to explore suitable blended learning models and address challenges related to digital equity, educator readiness, and content alignment to maximize the benefits of blended learning in language education.

Introduction

Blended learning, a blend of real-time in-person classroom learning (human pedagogy) with the utilization of Web-based (online) resources, is the finest and most practical apparatus to correspond, learn and instruct in L2 (Asif et al., 2022; Dziuban et al., 2018; Madden et al., 2019). Blended learning's definitions have been devised from numerous angles of learning and vary from being too general so that practically any learning experience can qualify, which incorporates instructional technology, to others that feature a particular portion of an online curriculum combined with conventional pedagogy in a face-to-face environment. Blended learning has included various methods, for instance, connecting means of online technology, instructional apparatuses, educational technologies, and authentic work assignments (Bidarra & Rusman, 2017). The broadness of clarifications implies that virtually anything can be viewed as blended learning (Oliver & Trigwell, 2005). Madden et al. (2019) advise that "blended learning itself is a kind of bridge between traditional in-person learning and the modern movement of online education. It seeks to integrate the benefits of the two: the face-to-face (F2F) interaction and the personal advising and mentoring of the former, with the scale, asynchrony, and flexibility of the latter" (p. xii).

Although there was a significant discussion of hypothetical advances that blended learning peaked over a decade ago, the curiosity to explore blended learning persisted among practitioners and researchers, who frequently asked: why, when, how, and what are we blending (Bonk & Graham, 2012; Dziuban et al., 2018; Hrastinski, 2019; McCarthy, 2016)? Also, the term is repeatedly used within academia; there is still uncertainty about what blended learning really means (Hrastinski, 2019; McCarthy, 2016).

The two most frequently quoted definitions of blended learning in the literature are still those proposed by Garrison and Kanuka (2004) and Graham (2006). Garrison and Kanuka state, "Blended learning is the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (2004, p. 96). This definition does not specify whether lesson-driven exercises and drills using technology can be viewed as blended learning. It primarily blends the face-to-face (F2F) pedagogical modality with online instruction. Graham explains that "Blended learning systems combine face-to-face instruction with computer-mediated instruction" (2006, p. 5). These definitions lead to a consensus that blended learning's essential elements are in-person, real-time F2F interaction, and Web-delivered instruction. Similarly, Keengwe and Kang (2013) describe blended learning as a conventional real-time F2F and Web-delivered learning environment where technology collaborates with all participants. Researchers have likewise delineated blended learning in psychological terms, suggesting that learning happens in a conventional setup while online situations impact on educators' and learners' affective domains (Boelens et al., 2017; Hwang & Chang, 2016; Rasheed et al., 2020).

With numerous definitions of blended learning in use across academic domains (Bonk & Graham, 2012; Garrison & Kanuka, 2004; Madden et al., 2019; McCarthy, 2016; Picciano, 2015; Stein & Graham, 2014), the term has been argued over for more than 20 years (Graham et al., 2013; Moskal et al., 2013). The primary argument is the longevity of the words distance education (Davidson-Shivers et al., 2018). Another substantial argument is the interchangeable use of blended and hybrid learning (Garrison & Kanuka, 2004; Hrastinski, 2019; O'Byrne & Pytash, 2015). A tertiary argument is the different varieties of blended learning models accessible to tertiary and higher education organizations (Bonk & Graham, 2012; Keengwe & Agamba, 2015; Horn & Staker, 2011). Madden et al. (2019) state that blended learning is one of the most up-to-date developments in higher education and is increasingly well-regarded; however, research on blended learning is still nascent (p. xii).

In addition, the global pandemic has changed the world remarkably (d'Orville, 2020) and unloaded unprecedented baggage for L2 educators worldwide, especially in the developing world. During the pandemic, researchers have underscored the importance of blended learning (Henshaw, 2020; Reuge et al., 2021), providing novel opportunities to learn and grow (Bonk, 2020; Lockee, 2021). Where the global pandemic disrupted the learning process of 90 percent of learners worldwide (Quraishi et al., 2020; Reuge et al., 2021), blended learning offered new opportunities and turned out to be the new normal in tertiary and higher education (Henshaw, 2020). In brief, blended learning during COVID-19 has revolutionized the traditional teaching and learning process worldwide (Reuge et al., 2021; Wang et al., 2021).

L2 educators, accustomed to traditional F2F instruction, were forced by administrators to replace in-person instruction with a combination of synchronous and asynchronous pedagogy, known as blended learning. With little or no technical training, L2 educators grappled with these new challenges through the pandemic. Many are still grappling. Language learners could not get maximum benefits from the blended learning

programs due to their diverse cultural, linguistic, and technological backgrounds and limited cognizance and training while dealing with these systems in the classroom.

To assist L2 educators and learners, this review presents several models of blended learning used in academia as well as the models best suited for language instruction. Thorough knowledge of blended learning models will facilitate L2 educators in course design and implementation. It is also anticipated that researchers, practitioners, educators, and other interested groups will devise innovative courses of action concerning blended learning, yet examine the efficacy of such learning to consider instructive encounters and use information as well as evidence to enhance blended learning persistently. They will also help in what capacity blended learning can be implemented, upheld, and assessed at institutional, departmental, programmatic, and individual levels during the pandemic era and beyond.

Blended Learning Models

A broad range of blended learning models has been proposed based on the significant characterizations illustrated above. Blended learning models generally emphasize surface-level or physical attributes instead of instructive or psychosomatic characteristics (Stein & Graham, 2014). Researchers have employed various blended learning models in tertiary and higher education institutions (Crawford & Jenkins, 2017; O'Byrne & Pytash, 2015). Nevertheless, various hurdles, such as online instructive activities and drills, digital technologies, time management, and organization-level collaboration, have prohibited the total acceptance of blended learning by education organizations (Werth et al., 2013). Another obstacle to consider is modifying the pedagogical apparatuses of current academic staff because of ordinary events. The blended learning models discussed in this review have been customized in accordance with blended learning definitions as a template for the present research.

NIIT Characterization of Blended Learning Models

Researchers have mentioned that the National Institute of Information Technology (NIIT) (as cited by Valiathan, 2002) characterized early blended learning models into three types that were the best fit for performance and training: skills-driven, attitude-driven, and competency-driven models (Valiathan, 2002).

First, Valiathan's (2002) *Skill-driven Model* aims to acquire explicit knowledge and skills, where educators provide support and constant feedback. An instructor does not merely attend a class but works as a catalyst for change, inspires learners and enables the pedagogical process to be completed according to learners' needs. In addition, instructors support and evaluate the learning process and provide learners with formative and summative (constructive) feedback. The skills-driven model applies various Web-based as well as offline reading materials and joint study aids, such as manuals, books, brochures, and flyers to accomplish learning objectives (Valiathan, 2002). A fundamental part is apparatuses for synchronous and asynchronous correspondence among students and instructors/ facilitators (email, chat, videoconferencing, discussion forums). At times, conventional classroom teaching is also used.

Next, the *Attitude-driven Model* intends to develop behaviors and attitudes where shared communication and collaborative tasks blend conventional classroom learning and online education (Valiathan, 2002). The most significant aspect of this model is the correspondence among partakers so that they can gain new knowledge in a risk-free learning environment. Valiathan states that the attitude-driven model frequently utilizes

simulations of practical life/ work events, role-playing, synchronous webinars, discussion opportunities, Web-based interaction and joint ventures (2002). Finally, the *Competency-driven Model* is anticipated to improve competencies and implicit knowledge where students must notice specialists in the field and at work (Valiathan, 2002). Competencies are perceived, at this juncture, as the aptitude to make proper judgments based on information obtained and standards acquired.

Nonetheless, to make a correct judgment at the perfect time, it is mandatory to not only mention specific knowledge but also define implicit knowledge that one gains through enough practice or observation and collaboration with specialists in the field. In short, the essence of this model is the mediation of implicit knowledge. Valiathan (2002) proposes the significant use of mentoring (synchronously and asynchronously), discussion forums, training workshops, and different electronic communication modes. Oliver and Trigwell (2005) criticized the NIIT categorization of the three models for its intermixed nature, as it also depends on instructional approaches and learning aims.

The Charles Graham Model (2006)

Graham (2006) describes a blended learning model to discover desirable blends, rather than undesirable blends, that make most of the attributes and avoid the shortcomings of in-person F2F and Web-based learning. He further elucidates various characteristics and limitations of the model by executing real-life in-person classroom discussions contrasted with Web-based classroom situations. For example, an educator may decide to mix both learning conditions, beginning with a brief investigative F2F conversation to inject energy for the subject and prepare a platform for a thorough follow-up conversation in a Web-based environment (2006, pp.18-19).

Graham recommends characterizing blended learning models as per four dimensions, four levels, and three categories (2006). His four measures are time (synchronous/ asynchronous), space (in-person, F2F, and Web-based, online), humanness (high human, low human/ no machine, high machine), and sensual richness (high, low/ all senses, text-only). These are identified with the blended learning notion of bimodal delivery, including in-person or co-present and computer-mediated components. How these components are utilized for various learning goals and equilibrium amid constituents enables more than one model to be built homogeneously with the mentioned definitions.

Graham's four levels are activity, course, program and institution (2006). Using blended learning methods and activities for an institution is, to a certain extent, different from blended learning activities for an individual. Last, Graham presents three different types of the blended model associated with purpose: (1) *enabling blends* that emphasize adaptability and access, (2) *enhancing blends* that strive for supplementing conventional instructional methods, and (3) *transformative blends* that aim at evolving instruction. According to Graham (2006), the third type implies, for instance, that students might perform a more dynamic part in the creation of their individualized education. Transformation in this implicit hierarchy is the most valuable objective. Consequently, Graham (2006) shifts from past modalities in his classification to ponder scope together with the academic target.

The Chew, Jones and Turner Model (2008)

Chew, Jones and Turner (2008) investigated four different blended learning models and presented a theoretical framework for examining those using Vygotsky's and Maslow's insights into learning.

The first model is Gill Salmon's *Structured E-moderation*. The mediator monitors the progression of stages to persuade learners to feel motivated and welcome in an online setup. Chew et al. (2008) praise this model along with Maslow's *Needs Hierarchy* (2008); however, this model cannot be viewed as a blended learning model. This is most likely an outcome on which the researchers base their own relatively weaker blended learning definition.

The second model is Wenger and Ferguson's *Sun Microsoft Systems*' 'learning ecology' (2006), which appears as a quadrant of self-directed learning and practice content. Self-directed investigation of content might involve reading a book or asynchronous (Web-based) resources. Self-directed practice may include learners' interaction with peers and discussion in small groups. Guided study of the content may comprise video conferences or classroom lectures. Guided practice may include employing lab practice or mentoring. This model clarifies that various delivery modes can pursue diverse learning goals. Chew et al. (2008) acknowledge the model's capacity to be dependable and coherent with Vygotsky's insights into the *Zone of Proximal Development*. Students can develop their insights under the supervision of an expert. However, this model's primary limitation is that it does not offer a reasonable model for execution.

The third model is Chew's *Blended Learning Continuum*. The University of Glamorgan adopted an organization-wide strategy for blended learning. However, it did not execute it coherently and consistently, instead permitting faculties to have various modules with a range of e-intensiveness, from negligible PowerPoint presentations to entirely Web-based content. Moderate (intermediate) items on the scale address permission to access learning resources tackled through interactive resources, e-assessments and discussion forums/ boards. This model is very adaptable, recognizing that various faculties in different fields might execute blended learning differently. Chew et al. (2008) reject the notion that Jones' *Continuum* should be presented in percentages. The possibility is that merely a 30–80% blended course is simply an overgeneralization, regardless of whether it might be measured or agreed upon. Nonetheless, the model is not comprehensive; it merely has delivery modes and is hypothetically weak (Chew et al., 2008).

The fourth model is Garrison and Vaughan's *Enquiry-based Framework* (2008) that visualizes learners and instructors as members of a *Community of Enquiry*. The name relies on Wenger's research on *communities of practice*. Similarly, a community of practice comprises experts who communicate comprehension and figure out how to perform a task efficiently. Consequently, a *Community of Enquiry* contains students who develop their insights by collaborating with one another. This model shifts the focus from delivery methods to learning. Technology plays a vital role and has three principal components, that is, *cognitive presence* (data exchange, preparing as well as analyzing ideas), *teaching presence* (giving structure, direction and guidance), and *social presence* (empowering teamwork and coordinated effort). Chews et al. (2008) consider the model coherent and dependable, with significant Vygotsky and Maslow insights. Nonetheless, the procedure for operationalizing such a dream requires a massive amount of time and determination (Moskal et al., 2013; Vaughan, 2010).

The Staker and Horn's Model (2012)

Staker and Horn (2012) contribute the most effective approach to blended learning. They recognize that blended learning courses shift enormously based on varied pedagogical impacts on students' learning, comprising instructors' roles, physical space, scheduling and instructional methods (Horn & Staker, 2015; Staker et al., 2011). They also proposed six original models, which were later reduced to four. The six original models comprised face-to-face driver, rotation, flex, online lab, self-blend (à la carte), and online driver (enriched virtual) (Horn & Staker, 2011, 2015; Staker, 2011). These models prove some facets of face-to-face as well as Web-based (online) teaching and vary regarding pace, path, and time. Almost all the models last for the duration of a typical school day on campus (the location remains mostly the same). Staker and Horn's (2012) characterization of the blended learning model is undoubtedly informed by employing their bimodal interpretation of blended learning. The following table provides a brief description of Staker and Horn's (2012) six models:

Table 1
Staker and Horn's six models

Model	Descriptions
Face-to-Face Driver	An instructor is still regarded as the principal deliverer/ distributor of course content. Web-based (online) learning facilitates struggling learners and supplements classroom learning (Staker & Horn, 2011, 2012).
Rotation	Learners rotate between varied learning apparatuses, including online working environments such as online, small groups, independent tasks, and additional classroom-based methods (Horn & Staker, 2015) and at the instructor's discretion or within a pre-set (fixed) timetable.
Flex	Learners study pertinent content primarily online through an independently personalized schedule and in-person facilitation arranged by the instructor depending on the situation (Staker & Horn, 2011, 2012); nevertheless, location is always a brick-and-mortar setting. The educator stays on-site, supervising individual learners as well as their learning progress.
Online lab	Learners undertake an extra Web-based (online) course in an F2F classroom environment to supplement their learning. They frequently meet synchronously in a computer lab under a lab attendant or non-certified instructor (Horn et al., 2015).
Self-blend (a la cart)	Learners choose to undertake a supplementary Web-based course off-campus and their conventional courses (Staker & Horn, 2011, 2012). The Web-based (online) course or part of the lesson does not replace learners' traditional courses because its mode of delivery is entirely online with a different online educator.
Online driver (enriched virtual)	Learning is predominantly online, with learners' periodic visits to brick-and-mortar settings for in-person tuition (Staker & Horn, 2011, 2012) with the same instructor. The enriched virtual model allows learners to rotate within a particular course instead of one course instructed in a traditional setup and another through a virtual mode.

Staker and Horn (2012) chose to reduce model (1) as inadequately dissimilar to (2), (3) and to consolidate (4) and (5). They were left with the following sub-classifications of the rotation model: rotation, flex, self-blend, and enriched virtual (2012). The sub-models adhere to the layout (format) of partly face-to-face instruction and partial online delivery,

with variations in locations (synchronous and asynchronous). Horn and Fisher (2017) illustrate that sub-rotation models are executed in a typical conventional classroom synchronously and asynchronously.

Staker and Horn's (2012) nomenclature for the four models is predominantly implemented in tertiary and K-12 environments and is much cited in peer-reviewed research journals. Nevertheless, these investigations have not been regarded as empirical studies (Halverson & Graham, 2019; Yang et al., 2021). Staker and Horn observed different variations of the rotation model concerning whether learners rotate inside the classroom, in a different room, or off-campus (2012), and supplementary blended learning models have appeared over the last decade, such as station rotation, lab rotation, individual rotation, and flipped classes (Crawford & Jenkins, 2017).

Table 2
Variations of the rotation model

Model	Description
Station rotation	Learners rotate between various learning stations in a brick-and-mortar situation, collaborate in small F2F groups with an instructor, and self-coordinated Web-based learning during their school day to a fixed schedule (Horn & Staker, 2015). For instance, one station might incorporate independent tasks, whereas an alternative is instruction for a small group and an additional online learning station. Importance is attached to the instructor's use of students' data, received from Web-based tools to put learners in particular groups. Moreover, this model has primarily been implemented and practiced at the elementary level (Horn & Fisher, 2017; Horn & Staker, 2015).
Lab rotation	Learners within a similar class period devote (use) a portion of their class period (time) to traditional F2F teaching and part of their class period (time) learning to Web-based (online) tools in a computer lab (Horn & Staker, 2015).
Individual rotation	Learners rotate between learning platforms, dependent on an individually fixed and customized schedule created by computerized algorithms or educators (Horn & Staker, 2015). The learners have a plan designating synchronous and asynchronous learning environments (when, where, and for what purpose to meet). This model accomplishes a mixture of Web-based learning and F2F classroom learning and is implemented by replacing conventional F2F classroom time with Web-based (online) learning time. In addition, the individual rotation model is an efficacious method for reducing face-to-face class sizes while extending students' interaction, involvement, motivation, and learning.
Flipped classroom	An instructional model uses a Web-based mode to deliver a preliminary synopsis and background knowledge of the topic (foundational material) online through video tutorials (lesson) prepared by the instructor before the class meets in person in a bricks-and-mortar setting, a preloading of instruction (Horn & Staker, 2015). Learners spend class time on collaborative tasks, assignments, and projects and work in small groups (Horn & Staker, 2015). This enables learners to develop their understanding, comprehend advanced-level ideas, discuss higher-order tasks and get assistance in a face-to-face class environment (Strayer, 2012). In his research, Strayer found that learners in a flipped model were fully involved and open to discussion and collaboration compared to those in a traditional classroom setting (2012). He concluded that these results were

> gathered from an introductory course where students did not have any necessary background knowledge concerning the subject to connect the activity to the lesson (2012).

Implications of Blended Learning Models

The implications for experts and researchers regarding blended learning models are contingent upon their specified objectives and the way they address implementation challenges. Consider, for instance, the 'learning ecology' model, which emphasizes cost-effectiveness. Online self-study may appear as an attractive option for those aiming at cost reduction. Conversely, for proponents of collaborative and constructivist learning paradigms, online group tasks and discussion may constitute integral components of the curriculum. Either objective might fail to be accomplished, for instance, if programming authorizing charges are higher than anticipated or if Web-based correspondence is badly directed or cumbersome. However, with this model, more than one objective is harmonious, but that is not guaranteed.

Graham's rationales for blended learning, including instructional affluence, access to information, societal communication, individual agency and cost-effectiveness, have been well-documented (2006). Nevertheless, concerns persist regarding the ability of blended learning to bridge the 'digital divide', particularly in regions with limited digital literacy (Bancroft, 2016). This worry has lessened in developed nations because of the widespread dissemination of digital technology, but it still involves some cost-effectiveness arguments. Graham (2006) states possibly massive returns on investment; however, Launer (2010) rejects the proposition that blended learning is less expensive due to the cost of acclimatizing and upgrading data, materials, and infrastructure, as well as providing adequate technical support.

Researchers argue that the fundamental source of cost savings is staff savings (Graham et al., 2011; Horn & Staker, 2011); however, the principal debate hinges on instructional efficacy. In addition, blended learning accommodates different learning styles (Uğur et al., 2011); the debate persists and enquires whether it delivers what it intends to deliver. For instance, the lecture method and the lecturer's role were questioned for a while; this mode is still a typical means of training learners and conveying knowledge in most developing nations. It has been ferociously criticized on account of its inefficiency and unidirectional nature (Ellis, 2008). Thus, the two claimed advantages of online technology (its capacity to connect space and time) are inadequate to make the lecture method as engaging and stimulating as an entirely blended learning mode.

Another example is group discussions in small and large setups. These activities offer an advantage by enabling reticent learners to participate voluntarily at their own pace (Hew & Cheung, 2014). However, researchers have observed that some learners feel inhibited and unable to contribute to online discussions due to linguistic, cultural, and spatiotemporal limitations (Hew & Cheung, 2014). The implication appears that just uploading a learning activity to the Web is not enough to ensure the effective implementation of pedagogical outcomes. Supplementary factors might be comparably significant, for instance, delivery mode, content authenticity and learning style. Graham and Allen (2011) have observed that research findings support the efficacy of blended learning, which may be partly attributed to the alignment of course content with web-based delivery methods. Additionally, the preference for computerized assessments among learners is congruent with the digitization of education.

Blended learning, as evidenced by research, yields superior learning outcomes compared to traditional face-to-face or entirely web-based modes (Dziuban et al., 2018; Madden et al., 2019; McCarthy, 2016). Nonetheless, substantial empirical validation of diverse techniques remains challenging, primarily due to the multitude of variables involved. Consequently, it is imperative to structure blended learning initiatives meticulously, incorporating both self-directed and interactive components, tailored to the specific requirements of web-based strategies, to ensure their effectiveness and the validity of assessments.

Conclusion

This review highlights the significance of blended learning models across diverse educational contexts, spanning from K-12 to higher education and language instruction. Blended learning, characterized by its integration of both in-person and web-based resources, stands out as a versatile and transformative pedagogical approach that promotes learner-centred environments and develops educational outcomes.

However, amid its promise, blended learning does present formidable challenges that warrant attention. One such challenge is the issue of digital equity, where disparities in technology access among learners can hinder the effectiveness of this approach. Equally critical is the preparedness of educators, as successful blended learning implementation relies on instructors adapting their teaching methods and utilizing technology as an integral tool. Additionally, assessing learning outcomes in a blended learning environment introduces unique complexities that require innovative evaluation methods. The future of education, particularly in the post-COVID era, depends heavily on the seamless integration of traditional and online education through blended learning. This integration necessitates ongoing research, adaptable frameworks, and a steadfast commitment to enhancing educational practices. As educational paradigms continue to evolve, it is essential to prioritize innovative teaching and learning methodologies to stay at the forefront.

In short, addressing concerns surrounding equity, learner engagement, and educator readiness must remain central to the successful implementation of blended learning. This imperative applies not only to developing nations but also exerts influence in the broader educational landscape. As we navigate the ever-evolving opportunities and challenges presented by our digital age, it becomes our shared responsibility to prioritize the effective utilization of blended learning to enrich the educational experiences of learners worldwide.

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